



Revision number:1

Purchasing Agent: Debbie Gundersen

Item: LIQUID ANTI-ICER APPLICATOR (SKID MOUNTED)

Vendor: 43623H Kois Brothers Equipment Co.
5200 Colorado Boulevard
Commerce City CO 80022

Internet Homepage:

Telephone: 800 298-7370

Fax number: 303 298-8527

Contact: Ernest J. Kois

Email address:

Brand/trade name: Ice Killer 1600

Price: See Attached Price List
Terms: Net 30
Effective dates: 10/22/98 through 10/22/00
Days required for delivery: 60-90 Days
Price guarantee period: 6 Months
Minimum order: One
Min shipment without charges:
Other conditions:

REVISION #1: CONTRACT HAS BEEN EXTENDED THROUGH 10/22/00.

This contract covers only those items listed in the price schedule. It is the responsibility of the agency to ensure that other items purchased are invoiced separately. State agencies will place orders directly with the vendor (creating a PG in Finet) and make payments for the same on a PV referencing the original PG. Agencies will return to the vendor any invoice which reflects incorrect pricing.



Kois Liquid Anti-Icer applicator (skid mounted) Ice Killer 1600 delivered.

\$12802.00/ea.

General Specifications

The anti-icer is to be new 1998 or newer model. The equipment is to have all standard features. The equipment is to be delivered assembled, serviced, tested and ready to operate.

Skid

Unit shall include the tank, pumping mechanism, and spray-bar, mounted on a integral skid. When placed in the dump body, the spray applicator shall be held in place by a 1.5" tailgate latch pin at the rear and 3/8" transport (G70) chains with binders (no welding permitted). The tank shall be mounted on an independent cradle which is mounted to the slip-in frame. The slip-in frame shall be constructed of 4" structural channel frame and 4" x 2" tubing for the front header and lifting eyes. There shall be a minimum of four (4) lifting eyes to remove the tank from the truck and load to storage racks. The four lifting eyes shall be constructed of 4" x 2" tubing with 1/2" d-rings on the top of the tubing for lifting the unit from the dump body bed.

Tank

To have 1,600 gallon minimum, elliptical polyethylene tank capable of fitting a standard Tandem Axle Dump Truck 14' or longer with a flat floor of minimum 76" or greater. The tank shall be approximately 138" long x 78" wide x 49" tall, shall be held in place on the cradle with steel straps and bolts. The straps should not create a chaffing to the tank while the tank is in place. The tank shall be UV-8 protection of escorene long term through the rotationally molded process of forming the tank. The tank shall have an internal 304 stainless steel full baffle to prevent forward surge of liquid in tank. Surge plates are not acceptable as a adequate flow deterrent system. The top of the tank will have a 16" man way and be vented with a 4" removable air cap. To have a product level gauge with an indicator and scale clearly marked by embossed numbers showing tank level in U.S. gallon increments. The scale shall be located and of sufficient size to be clearly visible at the rear of the unit from ground level. The have a low level indicator light in the truck cab. Product will be transferred from the tank by a hydraulically driven pump rated at 150 U.S. gallons/minute minimum. (No PVC pipe or couplers will used anywhere in the system).

Distribution System

Product pump shall be a positive centrifugal type pump using the existing hydraulics supplied with the truck Central Hydraulic System or operate independent of the sanders hydraulic controls. The system shall be ground speed controlled by a mechanically controlled transmission and capable of applying 80 gallons per lane mile application rate for a single lane. The application shall be capable at speeds varying from 10 miles per hour to 50 miles per hour. The unit shall be capable of spraying a 12 foot wide path through a single boom, along with the ability to spray a 12 foot width path on either side of the truck. The complete unit shall be able to cover 36 feet. The control of this path shall be done by (5) independent spray booms covering up to 36 feet with all three booms open and operating. The spray booms will be controlled by electric valves to open and close each boom independently. The switching shall be done within the cab of the truck and within easy movement for the operator. The pump shall have a pressure switch mounted in the line to turn all water functions off when the unit comes to a complete stop. When the unit resumes travel the pump and valves shall be reactivated by the switch to the previously determined spray rate.

Spray System

The unit shall be capable of loading and unloading the liquid product from the truck. The process shall be done through a 2" quick disconnects mounted at the right rear of the platform protected by the ladder.



Liquid product can be distributed to either of the five (5) 12 volt DC electric control valves. The valves are a 1" ball style configuration in a single manifold design with the on/off drive motors aligned directly over the top of the valve.

Down stream of the control valve mounted to the manifold shall be a pressure gauge. Reading the system pressure for trouble shooting purposes.

Through the manifold control valves the liquid will flow through braided clear rubber hose to the individual nozzle booms. The nozzles shall be replaceable type 304 stainless steel 1" and smaller to 1/4" openings. These nozzles will be used to spray through the four outside spray booms.

The complete five boom spray bar must be able to fold up and out of the way for loading and unloading the body from the dump body and storage of the unit. When the spray bar is folded up or down the hoses connecting to the control valves shall be reconnected quickly by design. The disconnects are used for operations or storage.

In Cab Controls

Capable of the following: Transmission speed sensor, Pump Liquid Flow Meter sensor, Power On/Off Switch, Spray bar width control in various increments, Minimum of 4 modes of settings, unlimited amount of adjustments from one tenth of a gallon increments up to 9999 gallon increments (set by supervisor for desired intervals example 10 gallons per mile increase increments), Increments adjusted by application rate adjustment switch or manual operations, option port to add a blast switch in the future. Accumulated distance/gallonage memory, application rates, system calibration and memory functions, five switch panel spray boom, low water warning light. The unit shall have an option port for printer read outs.

Training

The unit shall be complete and ready for operation when delivered. A minimum of one day of training shall be provided with the unit when delivered.

Delivery

Delivery must include the following:

- S dealer's invoice
- S a copy of warranty
- S operator's manual
- S 2 complete sets of manuals including:
- S parts list, repair manual, operator's manual

Cost of these manuals is to be included in bid price.

Options

Dickey John control point in lieu of LSSC-III in primary bid.	Add \$3,578.00/ea.
New Spring Loaded Main Boom Nozzles in lieu of current unit.	Add \$1,320.00/ea.
Stainless steel frame 304SS on new units, in lieu of carbon steel painted.	
New units all steel components would be 304SS and only the ladder would be painted with Ceram-Kote a high wearing heat applied coating.	Add \$4,238.00/ea.

Reports

The contractor will submit yearly reports to the State Purchasing Agent (Debbie Gundersen) showing quantities and dollar volume of purchases by each agency and political subdivision. This report will be due by 10/1/99.

FINET COMMODITY CODE(S): **FOR AGENCY USE ONLY**



765660000000 - SPREADERS, TRUCK MOUNTED (FOR AGGREGATES, ICE CONTROL MATERIALS, SEAL COATINGS, ETC.)